# JOURNAL

OF THE

Royal

# United Service Institution,

WHITEHALL YARD.

PUBLISHED UNDER THE AUTHORITY OF THE COUNCIL.

Authors alone are responsible for the contents of their respective Papers.

VOL. XXXIII.



## LONDON:

PUBLISHED BY W. MITCHELL AND CO.,

CRAIG'S COURT, CHARING CROSS,

NEAR THE ADMIRALTY AND HORSE GUARDS,

WHITEHALL.

1889-90.

[Entered at Stationers' Hall, All rights reserved.]

LONDON:

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.

FIEL

Smit Mat: Salis ta Knu ta Stan fo Cros of Han Fi Zetli

Han Nice Hay Ac Step Ount Hur

.

3, B 2, B 2, B 1, C 2, C 1, C 1, C

3. I 3. C 3. C 2. F 3. I

## ROYAL UNITED SERVICE INSTITUTION.

#### PATRON.

#### HER MAJESTY THE QUEEN.

#### VICE-PATRONS.

FIELD-MARSHAL H.B.H. THE PRINCE OF WALES, K.G., K.T., K.P., G.C.B., G.C.S.I., G.C.M.G., A.D.C. ADMIRAL H.R.H. THE DUKE OF EDINBURGH, K.G., K.T., K.P., G.C S.I., G.C.M.G., K.C.B.,

A.D.C

LIEUT-GENERAL H.R.H. THE DUKE OF CONNAUGHT AND STRATHEARN, K.G., K.T., K.P., G.C.S.I., G.C.M.G., C.B., A.D.C., &c., &c.
FIELD-MARSHAL H.R.H. THE DUKE OF CAMBRIDGE, K.G., K.P., G.C.B., G.C.M.G., &c., &c., COMMANDER-IN-CHIEF.

de, de., de., de., commander-in-chief.

General H.B.H. The Prince Cristian of Schleswig-Holstein, k.G.

General H.S.H. The Prince W.A.E. of Saxe-Weimab, k.C.B. COLONEL H.H. THE DUKE OF TECK, G.C.B.

Smith, The Right Hon. W. H., First Lord of the

(Arressury, M.P.)
Matthews, The Right Hon. Henry, Secretary of
State for the Home Department, M.P.
Salisbury, The Most Noble the Marquis of, Secretary of State for Foreign Affairs, K.G.

Knutsford, The Right Hon. Lord, G.C.M.G., Secretary of State for the Colonies, M.P.

Stanhope, The Right Hon. E., Secretary of State for War, M.P.
Cross, the Right Hon. Viscount, G.C.B., Secretary

or State for India

Hamilton, The Right Hon. Lord George, M.P., First Lord of the Admiralty.

Zetland, Right Hon. the Earl of, Lord Lieutenant of Ireland.

Lansdowne, the Most Hon. the Marquis of, Viceroy and Governor-General of India, G.M.S.L.

G.C.M.G., &c., &c. Wallis, Sir Provo William Parry, Admiral of the Fleet, G.C.B. Keppel, The Hon. Sir Henry, Admiral of the Fleet,

G.C.B.

Symonds, Sir Thomas Matthew Charles, Admiral of the Fleet, G.C.B.

Milne, Sir Alexander, Bart., Admiral of the Fleet, G.C.B.

Elliot, the Hon. Sir Charles Gilbert John Brydone, K.C.B., Admiral of the Fleet. Grant, Sir Patrick, Field-Marshal, G.C.B., G.C.M.G.,

R.H.G., Governor of Chelsea Hospital. Paulet, Right Hon, Lord Witham, Field-Marshal, G.C.B., Colonel 1st Battalion Dur. L.I.

PRESIDENT .- FIELD-MARSHAL H.R.H. THE DUKE OF CAMBRIDGE, K.G., K.P., G.C.B., G.C.S.I., G.C.M.G., &c., &c., COMMANDER-IN-CHIEF.

### VICE-PRESIDENTS.

Hamilton, Sir Frederick W., General, K.C.B.
Nicolson, Sir Frederick W. E., Bart., Admiral, C.B.
Hay, The Right Hon. Sir John C. D., Bart.,
Admiral, C.B., D.C. L., F.R.S.
Stephenson, Sir Frederick C. A., General, G.C.B.
Ommanney, Sir Frasmus, Admiral, C.B., F.R.S.
Ilume, Henry, Col., C.B., late Grenadier Guards.

Higgins, W. F., Esq., late of the Colonial and War Offices. Graham, Sir Lumley, Bart., Colonel. Walker, Sir C. P. Beauchamp, General, K.C.B. Chelmsford, Lord, General, G.C.B, &c., &c. Fanshawe, Sir Edward G., G.C.B., Admiral.

Boys, Henry, Admiral (Chairman of Council).

#### COUNCIL. 1890-1891.

- 3. Baylis, T. H., Lient.-Colonel late 18th Middlesex Rifle Vols., Q.C. 2. Brine, Lindesay, Rear-Admiral. 2. Brine, Lindesay, Rear-Admiral. 3. Cilve, E. H., Major-General, Governor and Commandant, Royal Military College. 2. Colomb, Sir John C. B., K.C.M.G., Captain, late

- 2. Colomb, Sir John C. R., K.C.M.G., Captain, iace R.M.A., M. P.
  1. Colomb, P. H., Rear-Admiral.

  \*Daiton, J. C., Major, R.A., D.A.A.G., Intelligence Branch, War Office (Official).
  5. Eardley-Wilmot, S. M., Captain R.N., Assist-Direc, of Naval Intelligence.
  5. Erskine, G., General (Vice-Chairman).
  6. Goodenough, W. H., C.B., Major-General, R.A., Commanding The Thames District.
  6. Grean, Malcolm S., C.B. Colonel.
- 3. Green, Malcolm. S., C.B. Colonel.
  2. Hale, Lonsdale A., Colonel R.E. (retired).
  3. Hale, M. H., Colonel, late 26th Cameronians.

- Hutton, E. T., Lieut.-Colonel late King's Royal Rifle Corps, D.A.A.G., Aldershot.
   Jopp, A. Abererombie, Captain, late R.E.,
- Direc.-Gen. of Stores, India Office
- 3. Kilmarnock, Lord, Lieut.-Colonel, Royal Horse Guards.
- Simmons, Sir J. A. Lintorn, G.C.B., G.C.M.G., General R.E.
- 2. Smith, Philip, C.B., Major-General, Commanding Home District
- 3. Tracey, R.E., Rear-Admiral. 1. Walford, N. L., Lieut. Colonel, h.p., B.A. 1. Walker, G. G., A.D.C., Colonel, 3rd Bn. K. O. Sco. Bord.
- 3. Walker, J. T., C.B., F.R.S., General, R.E. (re-
- tired). 2. Willes, Sir George O., K.C.B., Admiral. 2. Wilson, A.K., Y.C., C.B., Captain R.N.

#### \* Nominated by the War Office.

N.B.-The Figures 1, 2, 3 indicate the year of Service on the Council.

SECRETARY AND CURATOR-Captain Boughey Burgess. LIBBARIAN, ASSISTANT SECRETARY, AND ACCOUNTANT-Lieut.-Colonel J. Day, late R.A.

#### CORRESPONDING MEMBERS OF COUNCIL:-

#### ROYAL NAVY:

Armistead, The Rev. C. J., M.A., Chap, ret.

Chap, ret.

Bosanquet, G. S., Rear-Adml.

Bowden-Smith, N., Rear-Adml.

Bower, Graham J., C.M.G., Comr., Brooke, A. T., C.B., Capt., Buckle, C. E., Capt. Buckle, C. E., Capt.
Bythesea, J., & J., C.B., C.I.E.,
Rear-Admiral, ret.
Clanchy, H. T., Comr.
Colomb, P. H., Rear-Adml., ret.
Comber, H. W., Rear-Adml., ret.
Coote, R., C.B., Adml., ret.
Crofton, S. S. L., Vice-Adml., ret.
Cuming, W. H., Rear-Adml., ret.
Durrant, F., C.M.G., Capt.

Eardley-Wilmot, S. M., Capt. Eardley-Wilmot, S. M., Capt. Egerion, Hon. F. Admiral, ret. Egerion, F. W., Capt., ret. Farquhar. Sir A. K. C. B., Adml., ret. Ferris, John, Comr. Field, E., Rear-Adml., ret., M.P. Fisher, J. A., C.B., A.D.C., Capt. FitzClarence. Hon. G., Capt., ret. FitzRoy, R. O'B., C.B., Rear-Adml Gardiner, Charles G., Lt. Gibbons, C., Capt., ret. Grenfell, Hubert H., Capt., ret. Hand, G. W., Capt. Harvey, J. W. F., Comr., ret. Hunt, W. G. F., Assist.-Paymaster, F.R.G.S., ret.

Johnstone, C., Capt.
Lindsay, Charles, Commander.
Long, S., A.D.C., Capt.
Marten, F., Rear-Admin, ret.
Napier, G. J., Vice-Admiral, ret.
Norocek, C. J., Capt.
Pike, J. W., Rear-Admiral, ret.
Prevost, J. C., Admiral, ret.
Rawson, H. H. C.B. Cons. Prevost, J. C., Admiral, ret. Rawson, H. H., C.B., Capt. Sandys, H. S., Capt., ret. Spencer-Smith, Seymour, ret. Verney, Edmund Hope, Capt., ret. Ward, Thos. Le H., C.B., Rear-Admiral. Laughton, J. K., M.A., late Naval

Instructor, Green. Coll.

Fawce

Garni

Rid

3rd (33 Cock Bo Foste

Ba

(38 Burr

Re

Ba

(4:

4t Dille R

Ada

Dist

R Fari Si Dou

41

Pric

Bay

N Fra B Gui

C

K Chi

R

F

Ri

Ge

L

Ne B

Rai 3

Bir

Wils

#### ROYAL MARINES.

Artillery. Drake, H. D., Captain.

Ingles, John, Capt.

Light Infantry. Farquharson, M. H., Col. Frampton, Cyril Lt.-Col., ret. Moody, J. McD., Col.

Gort, Viscount, Hon.

Cuffe. O.

late R.E.

late R.E.

Gen. late R.E.

Drake,

#### ARMY.

Lim. City Arty. (S. Div., R.A.) Cuffe. O. W., Major and Adl. Waterford Arty. (S. Div., R.A.) Archer, G. W., Lt. Col. late R.E. Drake, J. M. C., C.B., Maj.-Gen.

Harrison, Sir R., K.C.B., C.M.G.,

Maj.-Gen. late R.F. Innes, J. J. McLeod, Q.C., Lieut.-

Smith, P. G. L., Maj -Gen, late

Stotherd. R. H., C.B., Major-Gen.

Grover, G. E., Col. R.E. Woodward, C., Col. R.E. Sandwich, Earl of, Col. late 3rd

Batt. Gren. Gds. Davis. John, F.S.A., Lt.-Col. 3rd Batt. Royal West Surrey Regt.

Colonel

Guards Thomson, C. F., Major 7th Hus. Bell, C. W. B., Col. late 8th Hussars Watson, H. J., Major 11th Hussars Russell, J. C., Colonel late 12th Lancers Maillard, R. T., Col. late 16th Lancers Graves, F. J., Col. 20th Hussars. Crichton, the Hon. H.G. L., Lieut.-Col. late 21st Hussars Disney, T. R., Major R.A.
Finch, W. J., Maj.-Gen. late R.A.
Graham, C. S., Lt.-Col. late R.A.
Stirling, W., C.B., Maj.-Gen. late R.A Pennethorne, L. P., Capt. late R.A Hutchinson, A. H., Maj.-Gen. late Wake, A. J., Col. late R.A.
Wake, A. J., Col. late R.A.
Morgan, J. P., Maj.-Gen. late R.A.
Stoney, F. S., Lt.-Col., late R.A.
Knollys, H., Lt.-Col. R.A.
Hime, H. W. L., Lt.-Col. R.A.
Hope, J. E., Major-Gen. late R.A.
Oldfield, R., Maj.-Gen. late R.A.
Oldfield, R., Maj.-Gen. late R.A.
Varsons, L. W., Major R.A.
Watson, F. G. D., Col. 1. of Wight
Arty. (S. Div., R.A.)
Walker, A. G., Major R.A.
Campbell, J. R., Lt.-Col. late 2nd
Bde. S. Div., R.A.
Pead, L. W., Major Lan. Arty.
(S. Div., R.A.)
Hardle, H. B., Major late 2nd Bde.
Sco. Div., R.A. R.A.

Sco. Div., R.A.
Carter, F. W., Col. late 3rd Bde.
Sco. Div., R.A.

Duncan, P., Col. late 2nd Bde. S. I.

Div., R.A.

Byng, Hon. L. F. G., Capt. R.

Thompson, C. W., Capt. 7th Drag.

Horse Guarda

(2nd) (2nd)
Perrott, Sir Herbert C., Bart., Lt.Col. 3rd Bn. E. Kent Regt. (3rd)
Laurie, J. W., Lt.-Gen. late 4th Regt. Woodgate, E. R. P., Major Royal Lancaster Regt. (4th) Yorke, P. C., Major Royal Lanc. Regt. (4th)
Northumberland, His Grace the
Duke of. Col. 3rd Batt. Northumberland Fusiliers. (5th) Cockburn J G Col. lute 1st. Patt. Royal Warwickshire Regt. (6th) Sweny, G. A., Col. late 1st Batt. Royal Fus. (7th)
Sewell, T. D., Lt.-Col. late 4th
Batt. Royal Fusitiers. (7th) Batt. Royal Fusiliers. (7th)
Crawley, T. G., Col. 2nd Batt.
Liverpool Regt. (8th)
Brown, C. B., Lieut.-Col. late
Liverpool Regt. (8th)
Glen, A., Lt.-Col. Lincoln. Regt.
(10th)

Browning, M. C., Col. 3rd Batt. late Suffolk Regt. (12th) Champion, P. R., Lt.-Col. late 3rd Batt. Suffolk Regt. (12th) Parr, H. H., C.M.G., A.D.C., Co. late Somersetshire L.I. (13th) Layard, C.E., Maj.-Gen. late East

Yorkshire Regt. (15th) Brooke, C. K., Lt.-Col. late East Yorkshire Regt. (15th) Cameron, H. H. A., Major 2nd Batt, Bedfordshire Regt. (16th) Bailey, Vincent, Lt.-Col. 4th Batt.
Bedfordshire Regt. (16th)
Tompson, W. D., C.B., Maj.-Gen.
late Leic. Regt. (17th)
Utterson, A. H., Col. late Leicestershire Regiment (17th)

tershire Regiment. (17th)
Cadman. W. E., Lt.-Col. late 3rd
Batt. Yorkshire Regt. (19th)
Wilson. C. T., Major late 3rd stat.
Lancashire Fusiliers. (20th) Jackson, F. G., Col. 1st Batt. R. Scots Fus. (21st) Browne, Edm. C., F.R.G.S., Major R. Scots Fus. (21st)

Creek, E. S., Lt.-Col. Royal Welsh Fusiliers (23rd) Walker, G. G., Colonel 3rd Batt,

King's Own Scottish Borderers, A.D.C. (25th) Hale, M. H., Col. late 1st Batt.

Cameronians (Scotch Rif.) (26th) arton, E., Capt., late 1st Batt. E., Capt., late 1st Barton. Royal Inniskilling Fus. (27th) Brodigan, F., Col. late 1st Battalion

Gloucestershire Regt. (28th)
Murray, C. Wyndham, Col. late 1st
Batt. Glouc Reg. (28th)
Spratt, E. J. H., Major 1st Batt.
Worcestershire Regt. (29th) Holden, R., Capt. 4th Batt.

cestershire Regt. (29th) Swiney, G. Clayton, Col. late 1st Batt. Duke of Cornwall's Light Infantry (32nd)

#### CORRESPONDING MEMBERS-continued.

Riding Regt. (33rd)
Garnham, R. E. W., Lt.-Col. late
3rd Batt. West Riding Regt.

(33rd)
Cockle, G., Major late 4th Batt.
Border Hegt. (34th)
Foster, Kingsley O., Major late 4th
Batt. South Staffordshire Regt.

der.

al, ret.

Capt.

Rear-

Naval

Batt.

te 3rd

Col.

East

East 2nd 6th) Batt.

Gen.

ices-

3rd

satt.

. R.

ajor

elsh att. ers,

110 th)

ALE. ion lst

111

or-

laz

t

(38th) Burroughs, C. A. P., Capt. S. Lanc.

Regt. (40th)
Wilson, W. H., Lt.-Col. late 1st
Batt.Oxfordshire Light Infantry

(43rd) Adair, H. A., Major and Adjutant 4th Batt. Oxfordshire L.J. (43rd) illon, Hon. H. A., Major 4th Batt. Oxfordshire L.I. (43rd)

Disney, E. J., Col. 3rd Batt. Essex Regt. (44th)

Regt. (44th)
Farrington, M. C., C.B., Col. late
South Yorkshire Regt. (51st)
Doughty, Chester, Major and Adj.
4th Batt Shropshire L.I. (53rd)
Prickett, T., Major 2nd Batt.
Essex Regt. (56th) Baylis, T. Erskine, Major late 3rd Batt. Middlesex Regt. (57th) Foster, C. E., Col. late 2nd Batt. Northamptonshire Regt. (58th)

Frampton, W. J.. Col. late 2nd Batt. East Lanc. Regt. (59th) Gunter, E., Lt.-Col. late East Lan-

cashire Regt. (59th) fircham, A. H., Lt.-Col. lat King's Royal Rifle Corps (60th) Bircham, late Chalmer, R., Major King's Royal Rifle Corps (60th)

aikes, G. A., F.S.A., Lt.-Col. 3rd Batt. York and Lancaster Raikes. Regt. (65th)

Fawcett, R. Hill, Lt.-Col. late West Ready, J. T., Col. late Royal Berk- Lee, J. W., Col. 5th Batt. Rifle

shire Regt. (66th)
Allison, Jas. J., Col. 4th Batt.
Durham Light Infantry. (68th)
Tulloch, A. B., C.B., Maj.-Gen.
late Welsh Begiment (69th)

Hildyard, H. J. T., Col. late Highland Light Infantry (71st)
Barstow, T. A. A., Lt.-Col. late
Seaforth Highlanders (72nd)
Mackenzie, Colin. Lt.-Col. late 3rd

Seaforth Highlanders

(72nd) Kintore, Earl of, G.C.M.G., Major 3rd Batt. Gordon Highlanders

(75th) Man, A., Col. 3rd Batt. Gordon

Highlanders (75th)
Bengough, H. M., Col. late 2nd
Batt. Middlesex Reg. (77th)
Beazley, G. G., Lieut.-Col. late
Royal Irish Rifles (83rd)

Selby-Smyth, E. G., Major 2nd Batt. Royal Irish Rifles (86th) Malthus, S., C.B., Col. late 94th Regt.

Thomas, W. G., Major 2nd Batt. Manchester Regiment (96th)
Morton, G. de C., Colonel B.
Mun. Fus. (101st)

Hall, Montagu, Col. late 1st Batt. Royal Munster Fusiliers (101st) Coker, E. B., D.S.O., Col. late 2nd Patt. Durham Light Infantry

(106th) Girardot, Geo. C., M.-Gen. late 2nd Batt. Durham Light Infantry (106th) Wood, H., C.B., Col. late 4th Batt. Rifle Brigade

Brownrigg, H. S., Major Rifle Brigade

Brigade

Forbes, Hon. W. F., Col. late 8th Batt. Rifle Brigade Croker-King, C. E., Lt.-Col. late

A.P.D.
Bancroft, W. C., Lieut.-General
Macdonald, A. M., General De Fonblanque, E. B., late Con-

troner.
Cox, J. W., C.B., Lieut.-General
Pole, C.V. N., M.-Gen.
Stewart, W. L., Cel·late 2nd Depôt Batt.

Robinson, C. W., C.B., Colonel late

Rife Brigade Rogers, E., F.R.G.S., Lieut.-Col., Staff Officer of Pensioners, Canterbury

terbury
Goldsworthy, W. T., Majer-Gen.
late Essex Regiment (56th)
Griffiths, E. St. J., Colonel late
lat Batt. Yorkshire Regt. (19th)
Bateman, H. W., Major Army
Pay Dep., late 31st Regt.
Maclean, H. J., M.-Gen. late 3rd
Batt. Bifle Brigade
Stawell. W. St. Leger Alcock,

Stawell, W. St. Leger Alcock, Lieut.-Col. late 9th Batt King's Royal Rifle Corps

Meaden, J., Lieut.-Col., late 57th Regt. ast, C. J., C.B., Maj.-Gen. late East. 57th Regt.

57th Regt.
Thompson, R. T., Col. late 2nd
Batt. Essex Regt. (56th)
Mackinnon, W. C., Col. late E. K.
Regt. (3rd)
Walton, C. E., C.B., Col. Army
Service Corps

James, Walter H., Capt. late R.E. Barker, G. D., Maj.-Gen. late Barker, G. 64th Regt.

#### INDIAN FORCES.

Birch, W. B., Col. Bengal Staff Corps Gordon, J. J. H., C.B., Major-General Bengal Staff Corps Lloyd, E., Major Beng. S.C. Neave, E. S., Lt.-Col. late 18th Beng. Cav. Bythell, R., Colonel Bombay Staff Corps Ostrehan, E. S., Col. Bom. Staff Corps
Watts, J. G., Colonel Bombay Staff Corps
Cologan, J. F. Fitzgerald, Col. Bengal S.C.

Sewell, H. Fane H., Col. Madras Staff Corps, Hyderabad Contingent Clutterbuck, T. St. Q., Lt.-Col. late Bengal Infantry Prendergast, G. A., Col. Bengal Staff Corps Collen, E. H. H., C. L.E., Major-Gen, Bengal S.C., Secretary, Government of India Macaulay, G. W., Lt.-Col., late Comt. 1st Scinde Horse Travers, E. A., Major Ben. S.C.

#### HON. ARTILLERY COMPANY.

Raikes, G. A., Lt.-Col., late Instructor of Musketry.

#### YEOMANRY CAVALRY.

Crichton, Hon. H. G. L., Colonel Hampshire. Croft, R. B., F.L.S., F.R.M.S., Major steres

Mildmay, Sir H. E. P. St. Jonn, Rart., Colonel late Hampshire. Portman, Visct. W. H. B., Col. late West Somerset.

#### CORRESPONDING MEMBERS-continued.

#### VOLUNTEER CORPS.

Artillery Pooley, H., Captain late Cheshire Rutley, J. Lewis, Lt.-Col. 2nd Middlesex

Clinton, Lord E. W. P., Col. 1st City of London, late Rifle Brigade Acland, Sir Thomas Dyke, Bart., Col. 3rd V. B. Devon Regt.

Devon Regt.
Davidson, D., C.B., Col. Edinburgh City
Twyford, H. B., Lieut.-Col. late Hampshire
Hardinge, C. S., Viscount, Col. A.D.C., 1st V. B.
R. W. Kent Begt.
Sweny, Eugene, Capt. late 3rd Kent
Hutchinson, J., Hon. Col. 1st Vol. Batt. Lanc.
Engillees

Halford, Sir Henry St. J., Bart., Col. 1st Vol. Batt. Leicestershire Regt.

Vickers, C.B., Col. late 2nd City of London. Tomkins, A. S., Capt. late lat Middlesex (Victorias) Page, Sam. Flood, Major late London Scottish White, C. W., Major late Bth Vol. Batt. K.R. R.C. Roupell, C. M., Capt. late 23rd Inns of Court Strafford, Earl of, Honorary Col. late 17th Middx. Baylis, T. Henry, Q.C., Lt.-Col. late 18th Middlesex Cronin, Alfred C., Capt. late 19th Middlesex Leighton, Sir Frederick, Bart., P.R.A., Colonel 20th Middx.

Alt, W. J., Lt.-Col. 22nd Middlesex Vincent, C. E. Howard, C.B., Col. 13th Middlesex, M.P. Dartmouth, Earl of, Capt. late Stafford

Harding, Charles, F.R.G.S., Hon. Colonel 4th V. B. The Queen's Royal W. Surrey Regt. Longstaff, Llewellyn W., F.R.G.S., Lieut.-Col. late lat East York

#### COLONIAL RESERVE FORCES.

#### Militia.

Daly, R. T. A., Lt.-Col. Georgetown Militia. Montizambert, Charles E., Lt.-Col. Canadian Artillery, Imlack, R. W., Col., British Gutana. Turnbull, J. F., Colonel Canadian Hussars. Sargood, F. T., C.M.G., Lt.-Col. Field Artillery, Melbourne.

#### GOLD MEDALLISTS.

## Military.

- 1875. Captain H. W. L. Hime, R.A. 1877. Lieut. John Ross-of-Bladensburg,
- Coldstream Guards. 1879. Captain Emilius Clayton, R.A. Major T. Fraser, R.E.
- 1881. Captain J. K. Trotter, R.A.
- 1883. 1885. Captain G. F. Browne, Northampton Regiment.
- 1887. Captain Charles E. Callwell, R.A. 1889. Captain J. F. Daniell, R.M.L.I.

#### Naval.

- 1876. Commander G. H. U. Noel, R.N.
- 1878. Captain P. H. Colomb, R.N.
  1880. Captain the Hon. Edmund R.
  Fremantle, C.B., C.M.G., R.N.
- 1882. Captain Lindesay Brine, R.N.
- 1884. Captain Charles Johnstone, R.N. 1886. Lieutenant F. C. D. Sturdee, R.N.
- 1890. Captain Henry F. Cleveland, R.N.

#### 1890-91.

## Subject for the Military Prize Essay :-

"The Tactical Operations of the Future (including questions of Supply and Transport of Ammunition) as affected by the introduction of Magazine Rifles. Machine and Quick-firing Guns, and Smokeless Powder."

# CONTENTS OF VOLUME THE THIRTY-THIRD.

torias)
h.R.C.
iddx.
dlesex

lesex,
V. B.

R.

		PAGE
	Quick-firing Guns for Fortress Defence. By Captain Francis G. Stone, R.A. (R.A. Institution Prize Medallist, 1888)	1
1	Description of Martini Magazine Repeating Rifles. By Major Greville Harston, of the Canadian Militia	39
	The Royal Naval Reserve. By Lieutenant Warren F. Caborne, R.N. Reserve	41
	On Coaling Ships. By Lieutenant T. G. GREET, R.N	69
Y	The Value of Artillery in the Field. By Major-General C. H. Owen, late R.A.	81
	The more recent Improvements in the Thornycroft Torpedo-boats. By John Donaldson, M. Inst. C.E.	121
	The Relations between Local Fortifications and a moving Navy. By Rear-Admiral P. H. COLOMB	149
	Our Naval Position and Policy. By the Right Hon. LORD BRASSEY, K.C.B.	203
	Names of Members who joined the Institution between January 1 and March 31, 1889	219
	The Campaign in the North Sea and the Baltic. Translated from the Moniteur Universel de Tours. By Rear-Admiral P. H. COLOMB	221
	Italian Coast-Defence Ordnance. Changes from 1885 to 1888. Translated from Rivista di Artiglieria e Genio by A. Roberts, Esq	241
t	Training of Recruits in the German Infantry. Translated by permission of the Author by Lieutenant G. F. Ellison, 2nd Battn. Loyal North Lancashire Regt.	255
	Notices of Books	283
	Military Prize Essay. Subject: "Discipline: its Importance to an Armed Force, and the best Means of Promoting and Maintaining it." By Captain	200
	J. F. DANIELL, R.M. Lt. Infantry	287
	Essay on the same subject. By Captain C. E. D. Telfer, Worcester Regt	333
	Ditto. By Captain F. G. STONE, R.A.	375
	Ditto. By Captain A. M. MURRAY, R.A	431
	Forage for Military Purposes. By Grorge Fleming, C.B., LL.D., F.R.C.V.S., Principal Veterinary Surgeon of the Army	471
	Employment of Dogs for Military Purposes. By Veterinary Surgeon E. E. Bennett, Army Veterinary Department	499
	The Home Defence Bill as affecting the Volunteers. By Lieut, Col. F. W. Haddan, 4th Vol. Battn. the Queen's Royal West Surrey Regt	519
	The Soldier's Food, with Reference to Health and Efficiency for Service. By J. LANE NOTTER, B.A., M.D., Surgeon-Major, Medical Staff, Professor of Military Hygiene at the Army Medical School, Netley.	537

1		PAGE
+	The recent Changes in the Drill of the German Army. By Colonel LONSDALE	
	HALE, ret. R.E.  Recent Inventions in Gunpowder and other Explosives. By W. H. Deering,	567
1	F.C.S., F.I.C., Chief Assistant Chemist, War Department	603
	The Unprotected State of British Commerce at Sea. By Lieut. W. C. CRUTCHLEY, Royal Naval Reserve	625
+	The Column v. the Line as the Formation for Moving Reserves in the Infantry Attack. By Captain H. J. CRAUFURD, Gren. Gds	653
. :	Fortification and Fleets. By Major G. R. WALKER, R.E	659
7	Horse Artillery. By Captain W. J. ROBERTSON, R.H.A., Lecture II	721
1	The Nail-less Horse-shoe	750
+	Lancers and Lances. By LieutCol. R. Elias, h.p., late East Lancashire Regiment	751
+	Battle Training of Regimental Officers. By Colonel A. B. TULLOCH, C.B	769
	The Training of the Executive Branch of the Navy. By Captain Gerard H. U. Noel, R.N. (Gold Medallist R.U.S.L.)	803
	Recruits and Recruiting. By Deputy-Surgeon W. G. Don, M.D., London	
	Recruiting Staff	827
	Forage for Military Purposes. Lecture II. By GEORGE FLEMING, C.B., LL.D., F.R.C.V.S., Principal Veterinary Surgeon of the Army	855
	Names of Members who joined the Institution between 1st April and 30th June, 1889	877
-	The Field Artillery in its Position under the command of Generals of Army Corps Districts. By Prince Kraft 2v Hohenlohe-Ingelfingen. Translated, by permission, by LieutCol. Walford, b.p., R.A	879
1	The Drill Regulations of the German Field Artillery. By LieutCol. Walford, h.p., R.A.	901
	Notices of Books	917
	The Tactics of Coast Defence. By LieutColonel WALFORD, h.p., R.A	919
	On the Mariner's Compass in Modern Vessels of War. By Staff-Commander E. W. CREAK, R.N., F.R.S., Superintendent of Compasses at the Admiralty.	949
	The Mechanical Coaling of Steamers. By Mr. James Rigg, C.E	977
	The Pneumatic Torpedo-gun; its Uses Ashore and Afloat. By Captain E. L. Zalinski, 5th Artillery, U.S. Army	991
	The Photographing of Artillery Projectiles travelling through the Air at a High Velocity. Translated from the Deutsche Heeres-Zeitung. By	
	Commander H. Garbett, R.N	1025
	The Drill Regulations of the German Field Artillery. Translated by Lieut Colonel Walford (continued from No. 149)	1029
	Colonel v. Löbell's Annual Reports upon the Changes and Progress in Military Matters during 1888. Compiled by Colonel H. HILDYARD	1043
	Notices of Books	1077
	Index of Subjects and Authors	1091
	Proceedings of the Fifty-ninth Anniversary Meeting	i
	Statement of Changes amongst the Members	i
	Affiliation of the U.S. Institution of India with the R.U.S. Institution	vi

## CONTENTS.

ix

Tabular Analysis, Appendix A	PAGE
Appendices B and C	xi
Appendix D	xii
Appendix E	xiv
Report of the Referees (Naval Prize Essay), and Presentation of the Gold Medal	xxii
Books presented	xxviii
Books purchased	xxxiv
Parliamentary Papers received in 1889	xxxvi
Publications purchased and exchanged	xxxvii
Maps, plans, charts, &c	xxxix
Additions to the Museum	xxxix



